

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows. The claims are in the format as required by 37 C.F.R. § 1.121.

1. (Currently amended) A method for searching an applied data model, comprising:  
on a computer having a computer memory and a processor, translating a query to a set of statements operable to search the applied data model to an arbitrary level,

wherein the applied data model is a representation of an arbitrarily complex environment and comprises a plurality of defined data structures, wherein each of the data structures comprises one or more fields or properties associated with the data structure, wherein all data structures of the same type contain the same properties, wherein the applied data model comprises at least one component and a relationship corresponding to the at least one component,

wherein the at least one component represents a physical or logical entity in the arbitrarily complex environment, wherein each component has a set of fields which contains information relating to an atomic entity associated with the at least one component,

wherein the set of fields comprises:

a set of property fields containing information about the attributes or characteristics of the component; and

a field that contains a link to its component type,

wherein values assigned to the properties in the component are based on the attributes of the entity which the component was instantiated to represent,

wherein the relationship represents an association between the physical or logical entity and other physical or logical entities in the arbitrarily complex environment, wherein the relationship comprises:

a field that is a foreign key to its relationship type; and

a set of property fields containing information about one or more of the attributes of the relationship, and

wherein the components are stored in a schema, wherein property definitions of each component are linked to a type of component, wherein changes made to the type of component are automatically associated with all components of that type of component

without changing the schema to reflect a corresponding change in the arbitrarily complex environment,

wherein the schema is implemented in a database,

wherein the query is a component query or a relationship query;

searching the applied data model to the arbitrary level based on the set of statements translated from the query,

wherein the query is in a first query language, and

wherein the set of statements is capable of execution by a database management system supporting a second query language, wherein the database management system is associated with the database;

producing a set of replies to the set of statements, wherein the set of replies includes at least one component or one relationship at the arbitrary level; and

processing the set of replies according to the query.

2. (Original) The method of claim 1, wherein the set of statements is tailored to a table schema.

3. (Original) The method of claim 2, wherein the table schema implements a data model.

4. (Original) The method of claim 3, wherein the table schema represents a graph of the applied data model.

5. (Original) The method of claim 4, wherein the set of statements is operable to perform a graph search.

6. (Original) The method of claim 5, wherein the graph search is a breadth first graph search.

7. (Original) The method of claim 6, wherein the set of statements is in SQL.

8. (Previously Presented) The method of claim 2, wherein processing the set of replies comprises structuring the results based on the query and returning the processed results.

9.-11. (Canceled).

12. (Currently amended) A computer readable medium having code for modeling an arbitrarily complex environment, wherein the code is embodied within computer readable medium, the code comprising instructions for:

translating a query to a set of statements operable to search an applied data model to an arbitrary level,

wherein the applied data model ~~is a representation of the arbitrarily complex environment and~~ comprises a plurality of defined data structures, wherein each of the data structures comprises one or more fields or properties associated with the data structure, wherein all data structures of the same type contain the same properties, wherein the applied data model comprises at least one component and a relationship corresponding to the at least one component,

wherein the at least one component represents a physical or logical entity in the arbitrarily complex environment, wherein each component has a set of fields which contains information relating to an atomic entity associated with the at least one component,

wherein the set of fields comprises:

a set of property fields containing information about the attributes or characteristics of the component; and

a field that contains a link to its component type,

wherein values assigned to the properties in the component are based on the attributes of the entity which the component was instantiated to represent,

wherein the relationship represents an association between the physical or logical entity and other physical or logical entities in the arbitrarily complex environment, wherein the relationship comprises:

a field that is a foreign key to its relationship type; and

a set of property fields containing information about one or more of the attributes of the relationship, and

wherein the components are stored in a schema, wherein property definitions of each component are linked to a type of component, wherein changes made to the type of component are automatically associated with all components of that type of component without changing the schema to reflect a corresponding change in the arbitrarily complex environment,

wherein the schema is implemented in a database,

wherein the query is a component query or a relationship query;

searching the applied data model to the arbitrary level based on the set of statements translated from the query,

wherein the query is in a first query language, and

wherein the set of statements is capable of execution by a database management system supporting a second query language, wherein the database management system is associated with the database;

producing a set of replies to the set of statements wherein the set of replies includes at least one component or one relationship at the arbitrary level; and

processing the set of replies according to the query.

13. (Original) The computer readable medium of claim 12, wherein the set of statements is tailored to a table schema.

14. (Original) The computer readable medium of claim 13, wherein the table schema implements a data model.

15. (Original) The computer readable medium of claim 14, wherein the table schema represents a graph of the applied data model.

16. (Original) The computer readable medium of claim 15, wherein the set of statements is operable to perform a graph search.

17. (Original) The computer readable medium of claim 16, wherein the graph search is a breadth first graph search.

18. (Original) The computer readable medium of claim 17, wherein the set of statements is in SQL.

19.-22. (Canceled).

23. (Currently amended) A method for searching an applied data model, comprising:  
translating a query to a set of statements operable to search the applied data model to an arbitrary level,

wherein the applied data model ~~is a representation of an arbitrarily complex environment and comprises~~ a plurality of defined data structures, wherein each of the data structures comprises one or more fields or properties associated with the data structure, wherein all data structures of the same type contain the same properties, wherein the applied data model comprises at least one component and a relationship corresponding to the at least one component,

wherein the at least one component represents a physical or logical entity in the arbitrarily complex environment, wherein each component has a set of fields which contains information relating to an atomic entity associated with the at least one component,

wherein the set of fields comprises:

a set of property fields containing information about the attributes or characteristics of the component; and

a field that contains a link to its component type,

wherein values assigned to the properties in the component are based on the attributes of the entity which the component was instantiated to represent,

wherein the relationship represents an association between the physical or logical entity and other physical or logical entities in the arbitrarily complex environment, wherein the relationship comprises:

a field that is a foreign key to its relationship type; and

a set of property fields containing information about one or more of the attributes of the relationship, and

wherein the components are stored in a schema, wherein property definitions of each component are linked to a type of component, wherein changes made to the type of component are automatically associated with all components of that type of component without changing the schema to reflect a corresponding change in the arbitrarily complex environment,

wherein the schema is implemented in a database, and

wherein the query is a component query or a relationship query in a first query language,

wherein the set of statements is capable of execution by a database management system supporting a second query language, wherein the database management system is associated with the database, and

wherein the set of statements is tailored to a table schema which implements the applied data model;

searching the applied data model to the arbitrary level based on the set of statements, wherein the set of statements implements a graph search;

producing a set of results to the set of statements, wherein the set of results includes at least one component or one relationship at the arbitrary level; and

processing the set of results according to the query, wherein processing the set of results includes structuring the set of results based on the query.

24. (Previously Presented) The method of claim 1, wherein the query specifies the arbitrary level.

25. (Previously Presented) The method of claim 12, wherein the query specifies the arbitrary level.

26. (Previously Presented) The method of claim 23, wherein the query specifies the arbitrary level.